



NEWSLETTER OF THE Z88 USERS' CLUB

JANUARY/FEBRUARY

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EDITORIAL

Firstly, I would like to wish all members a Happy and Prosperous New Year. Christmas was certainly a busy time in our household, which unfortunately slightly delayed my putting the finishing touches to this issue. I would like to apologise for the delay, and hope to get the next issue ready on time for the beginning of March.

Contributions for this issue have been coming in a steady stream, and it contains some interesting articles and letters. Please keep the contributions coming in, preferably on EPROM with hard copy for my reference.

The club is now registered under the Data Protection Act as a Data User - I keep the membership records on my QL and use it to print out the addresses for mailing the newsletters.

Miracle Systems have produced a modem for the Z88, competitively priced at £49.95. The modem is non-approved, auto-dial and 1200/75 baud.

Over the last few weeks I have been evaluating a piece of software - **Z-Term** - from Wordmongers. This is an excellent terminal program, giving either a scrolling terminal (as used in Telecom Gold) or a viewdata terminal (for use with Prestel and the like). The software costs £49.99 on EPROM card, or £99.99 with the Miracle Systems modem described above. I will have an in-depth review of both ready for the next issue, but in the meantime further details may be obtained from Wordmongers on 0296 437878 or Miracle on 0454 317772.

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Two BBC micro magazines have run articles over the last couple of months on file transfer to the Z88. The January issues of 'Acorn User' and 'The Micro User' both have articles containing details on hardware linkup and BASIC programs for the transfer. The February issue of 'The Micro User' also follows this up with several BASIC programs which will work on the Z88 or oBBC micro, and a Z88 screen emulator for the BBC.

I also notice from the above-mentioned BBC mags that one or two dealers that previously specialised in the BBC series of machines have started selling the Z88, as the ideal machine for the 'BBC user on the move'!

In this issue you will find an article by Jeff Moon (0191) of Gateshead giving all the details you might want about file transfer to and from the BBC Micro. Jeff actually wrote to me with the details in November, so it is unfortunate that he missed the Nov/Dec issue, since we could have beat the "Big boys" and got Jeff's article out first.

If you have Prestel - either on the Z88 or another machine - Tony Cox (0186) of Northall has started an area called 'DOUBLE 8' within the Clubspot area of Micronet 800. The pages will be similar in content to this newsletter - interesting articles, letters, hints and tips, all about the Z88. Tony is keen to receive your contributions on Prestel MBX 525221211.

Little other news this issue I'm afraid, but I and several other members have experienced some difficulties with their Z88s.

My own problem has been the machine crashing when it is switched off, such that the only way of switching the machine back on is with a soft reset. This is not too bad, since of course all files in RAM remain intact, but it means losing all suspended activities, alarms, Panel and PrinterEd settings. The crashes appear in no regular pattern - sometimes two or three in a week, and until yesterday I had not had a crash for well over a month.

Tony Kaye (0158) has suggested to me that these crashes might be caused by poor connection of a RAM or EPROM card in one of the Z88 expansion slots. Attempting to affect a cure, I dumped all my files to the QL, removed my 128k RAM and two EPROMS, and then inserted and removed the cards a few times to try and clean the edge contacts on the cards. I then replaced the cards and did a hard reset. So far this regime seems to have cured the problem, but since the crashes have appeared at such irregular intervals, I cannot be sure.

Another effect left by the crashes is the internal clock appears to stop while the machine is in its crashed state. I have written to CC about my problems, but have yet to receive a reply. If you have been experiencing similar problems, please write and let me know. I will then pass these on to CC for comment.

MEMBERS' LETTERS

Mel Whatmough (0136)
BFPO Ships

Dear Roy,

I have encountered a problem whilst experimenting with various settings. While returning from checking settings of the Panel and PrinterEd I was confronted by a large bordered panel similar to the suspended activities panel in the middle of which was the wording "BAD HANDLE". At the bottom of the screen was the statement " 'Q' to Quit - Fatal Error ".

After pressing 'Q' twice I did manage to return to PipeDream, but the bottom line of the list of suspended activities was a row of meaningless symbols. Selecting this line produced the "BAD HANDLE" report again. I tried to remove the line of rubbish with <>KILL, and succeeded in removing everything from the suspended activities list, including the WHOLE of my diary entry!

(This was a 'soft reset' I suspect- Ed)

S.T. Zawadski (0116)
Dudley

Dear Roy,

Thank's for the first issue of 'Z88 EPROM', I found it most interesting, so there's no need to apologise for being the sole contributor.

I had the 1.41 version and experienced a number of inexplicable crashes. On contacting CC, I was asked to return my computer, which I did. This was returned to me with the 2.2 ROM.

However I have experienced a problem with it, since its return, due to a bug in the 2.2 operating system, which CC are aware of.

The bug in the 2.2 ROM appears when you are cataloguing files in the Filer and exit to either Index or PipeDream direct from the cataloguing operation. Any files in the Applications List which you have loaded from RAM or EPROM cards cannot be saved or erased, as an 'In Use' error message appears if you try and do this. This seems to be due to the file being left open as a result of a direct exit from the cataloguing. The solution? <>KILL all suspended activities and perform a soft reset.

Hopefully, next time I write to you, I will be able to enclose some programs which Industrial Engineers may find useful.

(I have been unable to reproduce this fault using the method outlined above, but many members have written after experiencing the problem, so I presume it must still exist.- Ed)

David Whyte (0175)
Warrington

Dear Roy,

Many thanks for the first copy of Z88 Eprom which arrived today. I am a graduate of earlier machines linked with Clive Sinclair, most recently a Spectrum +2 (I never got round to buying a QL). It seems to me that the proliferation of computers has meant that understanding of them has declined; at work I

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use an IBM PC/XT almost entirely through third party software. This means that I gain little understanding of the machine itself. The advent of an innovative machine like the Z88 rekindles my interest in really understanding new technology rather than simply being an end-user having to accept other peoples prescriptions for what I need. My wife says that having this new machine in the house reminds her of the enthusiasm I displayed in the days when I had my ZX81 - but, I hasten to add, without the frustrations of wobbly RAM packs!

I bought my Z88 from my local Dixons, who admitted that they knew nothing about it. I first viewed the machine at a larger urban branch of the store, but discovered that certain Dixons Business Centres (as distinct from ordinary shops) seem to stock a wider range of products. I bought the Z88 PC-Link package from one of these for £14.95, rather cheaper than the price quoted in the leaflet from CC. The salesman pointed out that my PC would have to have an RS232C card fitted (see how ignorant I'd become - I didn't know if I had one) but offered me a money back guarantee if I couldn't use the pack.

The package consists of appropriate software called IMPEXP88 on a 5.25" disk and a cable with appropriate connections for the two computers (the PC obdurately requires a female 25 pin connector - but the cable supplied was correct.) I run the program from floppy disk, although there are instructions for installation to hard disk which I have not yet tried to master.

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Apart from an early fault with my Z88 requiring exchanges (full marks to CC for telephone support), the system seems to work perfectly. I use Lotus Symphony (integrated word-processing, database, spreadsheet, graphics and comms) on the PC, and the latest version of this contains a conversion program for other popular business software including the other package I use - DBase III Plus. The PC Link software from CC handles the port configuration on the PC, and the translation of PipeDream files to Lotus 1-2-3 format (which I find I can use direct in Symphony without further translation) and back to PipeDream format in the other direction. So far I have transferred word-processing files in both directions and a DBase III Plus file via Symphony to the Z88.

The software also caters for translations between PipeDream and Wordstar formats; I used this to transfer the on-disk manual for reading off my Z88.

The real joy of this system is that I no longer have to go into the office at weekends or in the evening in order to work on documents, analyse data, etc., but can do so at home (in the living room even!), and transfer my work into the office machine in one operation. This represents a significant enhancement to both my work and family life, which in my view should be the ultimate aim of new technology.

No points for guessing that I am a fan of the new machine. In an unremarkable market of rehashed and repackaged machines, the Z88 represents to me, the availability of new technology at its newest and best.

Incidentally, I found that the entire contents of the first newsletter addressed the sorts of questions and issues I've been asking. Things I'd like to see are some information on the connections at the 25 pin plug end of the CC Serial Printer lead, and the potential for file transfer with the ZX Spectrum.

(RS232 connections as listed in Vol.1 No.1 are, I believe, the same as the CC lead. The club hopes to have some ZX Spectrum file transfer software available soon. - Ed)

Hans Meijeraan (0112)
Staines

Thank you for starting the users' club! As with all computers it will be good to get ideas and tips from other users.

After an unfortunate start with a couple of lock-ups, a not working EPROM and so on, I had my 000026 finally back to CC where they looked into the problems and solved them by installing a later version of the software, however NOT version 2.2. I had another lock-up, but fortunately the reset was already 'soft'. At the PCW show I had 2.2 fitted, all well now...?

In a spreadsheet when deleting a row (maybe it was about the third operation of this kind) I let the cursor disappear and nothing more. After reset and loading the same happened, whether using <>Y or <>DEL. In another spreadsheet the same operation put the machine in a minutes taking non activity before finally

having executed the command. Do we have a bug here? I can't see why it happens.

The catalogue files command should show the 'creation time and date' and the 'last updated time and date' (page 78 of manual), the example there shows that two out of three are the same, suggesting however that there should be a difference once you have used the file for another time, and that sounds correct. I do not see any difference on my machine so what is the point of having the two? Or did the software miss something?

Printer drivers please. If you have found your way around to have your work printed, save others the trouble and let us know what alterations will do the trick. This was printed before sending to Roy on the office HP Laserjet printer, the £ sign appears as a #, for the rest, no changes required.

R.J. Redding
BOB - G3VMR
Maidenhead.

Dear Sir,

Congratulations on issue 1, and here is some input.

Disk and file transfer on the TRS80 100/200

I have used the Tandy portable 3.5" disk drive very successfully, and it would seem feasible to connect it to the Z88. One puts three lines of BASIC into the computer which accesses a

utility disk, called File Manager, which then sets up the transfer system, albeit at the expense of some 7k of memory. It was beyond me to attempt to adapt this to the Z88, but I will gladly co-operate with anyone who feels capable. Telephone 0628 24929 (8am to 11pm)

I have the 'IMPEXP 88' program for the IBM PC link, and have seen it work, but I have not been able to use it myself due to RS232 problems. Many thanks for your notes, there must be a simpler way than these D sockets. I am convinced we should go for transferring files by radio, and then there would only be one connection - the aerial!

QUERIES, HINTS AND TIPS

John Wynn (0160)

For those members without a printer I would recommend the Brother EP44, which I find ideal for use with the Z88. Advantages of this printer are: Battery powered, and therefore portable; (a mains lead is available for about £10) it has dropped in price from a peak of £250 to around £139 at my local branch of Wildings.

Most importantly, it worked first time when I connected the CC RS232 lead to it.

(I hasten to add that I have no connection whatsoever with either Brother or Wildings)

Of course, the EP44 is rather slow at 16cps, compared to my home based dot matrix.

The following settings were required to use the EP44 with the Z88:

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EP44

Terminal mode
Baud rate 1200
Bit length 8
Parity N
Newline CR & LF
Code T/W
ER Y

Z88

Panel: Baud rate 1200
Parity None

PrinterEd:	On	Off
Underline	27,69	27,82
Subscript	27,85	
Superscript	27,68	
End of page	12	
Allow line feed	YES	
Translate	163 to 156	(to print £)

David Whitmore (0105)

My solution to the problem of a Z88 carry case is a clear polythene attache case obtainable from branches of WH Smith.

This inexpensive item (85p) seems almost made for the Z88. It has a plastic zip, which makes the case water and dirt proof.

Thanks to the sensitive keyboard of the Z88, and the clear polythene of the case, I find it quite possible to use the Z88 whilst it is still in the case. A great boon, if like me, you wish to use the Z88 with dirty or damp hands.

Mr R. Mackay (0168)

Is it possible to find the amount of memory remaining in the EPROM packs?

Is it possible to stop my Brother M1109 printer feeding the whole A4 sheet even if only a few rows are printed. It's a real pest.

Is it possible to search for a file on any storage pack without having to change device numbers etc.

Why does no indication appear in the 'cards' column in the Index even though I have a 32k RAM and a 128k EPROM fitted?

(The 'card' column does work - it is there ready to accept third-party software on ROM packs. This software appears on the Index Application List just like, say, PipeDream, and the slot number of the slot containing the ROM appears in the card column when the software is suspended. - Ed)

Clive Glover (0231)

Reference to Barry Cornhill's problem in the Nov/Dec Issue.

A disappearing column can be recovered in two ways : The easiest is to reset the column width, specifying the column in the command box. The file should then be saved and re-loaded. The column will then reappear. The second method is to load the file, specifying it as Plain Text. The Z88 stores PipeDream files as a sequence of complete columns separated by identifiers specifying the column name and width. In Plain Text form this column identifier can be edited, saved in Plain Text form, and then reloaded in normal format. The form of the column identifier is %CO:A,X,Y% where A is the name of the column, X is the column width and Y is the wrap width.

Reference to QL Transfer by Phil Borman.

Many thanks for prompt despatch. This package is very easy to use and is ideal for transferring documents between Quill and the Z88 and, best of all, saving security copies of Z88 files onto disk.

Transferring ACSII files from the Editor is a cinch. Details for making up a connecting cable are included in the lucid instructions. The program will do Batch receive which makes it very easy to back up a list of files with files saved under their Z88 names. Highly Recommended.

I have written a Z88 CLI file to back up all my files, but for some reason this causes the QL to receive files in an erratic manner, tending to concatenate files. I don't know yet why this happens. Has anyone managed to include pauses in a CLI file, as this may be a solution?

If you have a parallel printer interface for your QL you may find it easier to enter: COPY Serlhz TO PAR_ as an alternative to using the transfer program.

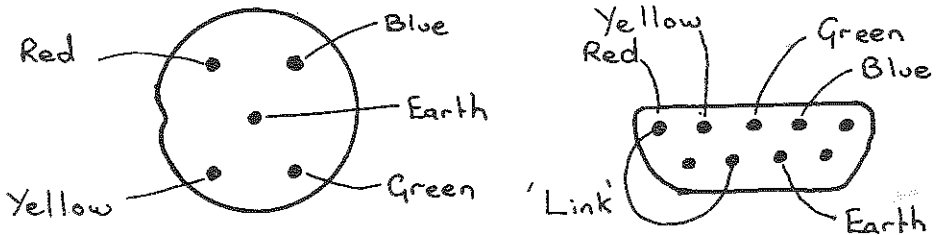
Ref: Protective cover for Z88

My wife has very kindly made my Z88 a pouch of thick padded corderuoy with a Velcro fastener. The construction is two thicknesses of fabric with a layer approximately 6mm thick of stiff foam padding. A perfect fit and a touch of individuality.

FILE TRANSFER - Z88 TO BBC MICRO

Jeff Moon (0191), Gateshead, Tyne & Wear

After some experimentation I have succeeded in making up my own lead and writing software between the two micros. The diagrams below are of the RS232 connections on both machines, and are views of the inside of the plug, or as the connections come out of the machines.



I am not really a very good programmer but the program printed below seems to work satisfactorily. The program obeys the protocols necessary for the Import/Export routine on the Z88. However there is not very extensive error trapping and it is sometimes only by pressing BREAK that you can escape from the occasional lockup. Transferring files seems to cause no problems. When receiving files from the BBC it is not necessary to specify a filename, as the Z88 accepts the BBC disk filename which is automatically sent by my program. ASCII files and plain text files present absolutely no problem. BASIC programs need to be spooled files and you must follow the instructions in the manual. PipeDream files are interesting. You are probably aware that the author of PipeDream, Mark Colton, also wrote View Professional for the BBC Micro.

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As I possess View Professional it is possible for me to transfer compatible files directly without alterations.

Diary files were causing me some problems until I made a rather interesting discovery. It is possible to load the Diary files into PipeDream then alter the diary entries. As long as this is then saved from PipeDream as Plain Text, it will then load back into the Diary. This makes it possible to create a Diary on View Prof. or Wordwise on the BBC, then transfer it across to the Z88.

You must observe the correct format of Diary entries, that is:

- 1) Each date must begin with a % symbol.
- 2) The date must be the correct format ie.
25/12/1987

Another interesting point is that dates or entries do not have to be in the correct order- the following entries work:

```
%18/11/1987
Have a nice day
%19/11/1987
Another day, another dollar
%17/11/1987
A day out of order
%1/8/1987
My Birthday
%25/12/1987
Have a Happy Xmas
%1/8/1987
I hope I get some nice presents.
```


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You may notice there are two entries for one date. (O.K. Jeff, we've made a note of your Birthday! - Ed) This does not cause any problems to the Z88 Diary - it simply appends the second entry to the first. I now need a similar diary program for the Beeb.

If members would like a copy of Jeff's program on disk (DPS, 40/80 or ADFS) send a formatted disk and return postage directly to Jeff at:
25, Shotley Gardens, Low Fell, Gateshead, Tyne & Wear. NE9 5DP.

Jeff is also willing to make up leads for members who do not have the necessary facilities or steady hand to do it themselves. These will cost £10 plus £1 post and packaging.

```
10REM BEEBLINK VERSION 1.0
20REM JEFF MOON 1987
30ONERRORCLOSE#0:MODE7:PRINTERR:PRINTERL:END
40CLS
50PRINTTAB(5,2)CHR$141+CHR$134"***BEEB=88 LINK***"
60PRINTTAB(5,3)CHR$141+CHR$134"***BEEB=88 LINK***"
70PRINTTAB(5,8)CHR$129"A Utility by Jeff Moon"
80PRINTTAB(5,10)CHR$131"Choose the Routine "
90PRINTTAB(5,11)CHR$131"You Require."
100PRINTTAB(5,13)CHR$130"1.Upload from Z88"
110PRINTTAB(5,15)CHR$130"2.Download from BBC"
120PRINTTAB(5,17)CHR$130"3.END"
130g=GET
140ONg-48 GOTO 150,160,170 ELSE 130
150PROCupload:GOTO40
160PROCdownload:GOTO40
170MODE7:END
180ONERRORCLOSE#0:END
190CLS
200DEFPROCdownload
210CLS
220PRINTTAB(0,2)CHR$141+"DOWNLOAD"
230PRINTTAB(0,3)CHR$141+"DOWNLOAD"
240INPUTTAB(0,5)"Which Drive for BBC file : "drives
```

```
250IFdrive$="" THEN drive$="0"
260INPUTTAB(0,7)"Name of File for Transfer : "load$
270IFload$="" THEN VDU7:GOTO260
280INPUTTAB(0,9)"Which RAM in Z88 : "ram$
290IFram$="" THEN ram$="0"
300INPUTTAB(0,11)"Name for Z88 File : "file$
310IFfile$="" THEN file$=load$
315PRINTTAB(0,13)CHR$131"Data being Transmitted"
320*FX21,2
330*FX8,7
340*FX3,7
350F%=OPENUP(":" + drive$ + ". " + load$)
370FORJ=1TO8:READV:PRINTCHR$V;:NEXT
380PRINTram$;
390READV:PRINTCHR$V;
400FORJ=1TOLENfile$:PRINTMID$(file$,J,1);:NEXT
410FORJ=1TO2:READV:PRINTCHR$V;:NEXT
420PRINT
430REPEAT
440R=BGET#F%
450PRINTCHR$(R);
460UNTIL EOF#F%
470FORJ=1TO4:READV:PRINTCHR$V;:NEXT
480*FX3
490PRINT
500CLOSE#0
510ENDPROC
520DATA17,27,78,58,82,65,77,46
530DATA47
540DATA27,70
550DATA27,69,27,69
560DEFPROCupload
570end%=0:start%=0:F=0
580CLS
590PRINTTAB(0,2)CHR$141+"UPLOAD"
600PRINTTAB(0,3)CHR$141+"UPLOAD"
610PRINTTAB(0,5)CHR$134"Name of File to Save Data ?"
620INPUTTAB(0,7)"Press RETURN for Screen Only."file$
630IFfile$>" " THEN F=OPENOUTfile$
640REPEAT
650*FX2,1
660A%=145
670X%=1
680R=USR(&FFF4)
690R=(R AND&00FF0000)/65536
700IFR=27 PROCcheck:GOTO740
710IFR=13 PRINT
```

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720IFR<>0THENPRINTCHR\$(R);

725IFR=17GOTO 740

730IF F>0 AND R<>0 AND start%=1 BPUT#F,R

740UNTIL end%=1

750PRINT

760*FX2,0

770*FX3,0

780CLOSE#F

790PRINTCHR\$134+CHR\$136"Transfer Complete

Press a Key":g=GET

800ENDPROC

810DEFPROCcheck

820R=USR(&FFF4)

830R=(R AND&00FF0000)/65536

840IFR=69 end%=1 ELSE end%=0

845IFR=70 start%=1

850ENDPROC

EXECUTING BASIC PROGRAMS FROM THE ALARM

The Z88 manual mentions that the Alarm can be made to run a BASIC program as well as sounding the bleeper, but does not make it very clear how to make this happen. As a result of a query from Jim Caldwell (0174) of London I have experimented a little with this powerful facility, and what follows is very similar to my reply to Jim.

The relevant pages in the Z88 Manual are p74 (the Alarm) and p198 (CLI files). The 23 character 'reason' field entered when setting the alarm can either be text - which will be displayed when the alarm time is reached - or a string of characters which is passed to the Command Line Interpreter (CLI); for the latter to occur the 'ALARM TYPE' field must be set to 'EXECUTE' when setting the alarm.

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To try this facility at its simplest level, write a short BASIC program, say to print a couple of lines of text, then call the Index to suspend the BASIC job. (At this stage, be sure that this is the only BASIC job you have suspended at the moment.)

Call the Alarm popdown, set the time and date, then in the 'REASON/COMMAND' field put:

```
#BRUN~E
```

and set the 'ALARM TYPE' to Execute. Escape from the Alarm popdown.

When the alarm goes off, the data will be interpreted by the CLI as follows:

```
#B Equivalent to square B to re-enter your  
previously suspended BASIC job.
```

```
RUN This then types RUN into the BASIC  
interpreter.
```

```
~E Equivalent to pressing Enter.
```

If the Z88 is switched off, when the alarm sounds, the BASIC program will still run, but as the Z88 comes on in 'LOCKOUT' state it will not accept any keyboard input.

If the 23 characters allowed in this field is not long enough to do what you want, then you can use it to load and execute another CLI file from the Filer. To do this use the command:

```
.*filename
```

where filename is a CLI file prepared in PipeDream and saved as Plain Text. This longer CLI file might create a new BASIC job, load in a previously saved program file, and run it.

SOFTWARE REVIEW: QL FILE TRANSFER

Ian Braby MPS (0123)

Two pieces of software are reviewed in the following article: 'QZ' from Sector Software, and 'QL Transfer' by Phil Borman. The latter of the two programs is available through the Club Software Library. Both programs are designed to transfer data from the Z88 to the Sinclair QL and vice versa.

Rather than putting their programs 'head to head' I felt it would be fairer to review the facilities of both programs, and add my personal view of the two at the end.

**"QZ" QL-Z88 Transfer Software
from Sector Software**

QZ comprises software for the QL (available on disk or mdv), a lead to connect the Z88 RS232 to the QL's ser2 and a sheet of notes which basically point you to a Quill file on the chosen medium.

The notes do also inform you that the software is unprotected and can be copied as required, but that it is encoded to prevent pirate copies flooding the market. It also mentions that QZ is compatible with Taskmaster, the multi-tasking manager from Sector Software. My hopes were raised - "It multi-tasks!", I thought - yes - but not under QRam; my first disappointment!

On booting the QL software you are presented with a menu of 9 options most of which are self-explanatory:

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- 1: Send to Z88
- 2: Receive from Z88
- 3: Directory device
- 4: Rename a file (can also be used to copy files)
- 5: Print a file
- 6: Delete a file
- 7: View a file
- 8: Quit to BASIC
- 9: Translate CR - switchable between the QL's carriage return code (10) and the Z88's (13)

The operation is very straight forward. First, on the Z88 Panel, Xon/Xoff and Parity must be set to 'off'; baud rate is best left at 9600. Files are sent and received using the Imp-Export function from the Index.

And off you go- it's all very simple to archive material on a QL disk (or mdv). But there are a few snags! Firstly - BASIC files cannot be transmitted and loaded back and still work! This is probably because their tokenised format is being corrupted by the QL.

Instead, you must save the BASIC program to a CLI file ([]+S ->:ram./S.sgn), load this into PipeDream to remove any extraneous characters and, perhaps, add the #B .J NEW header to allow the program to be executed into BASIC from the filer menu. Once this is complete save the BASIC from PipeDream as plain text and send this across to the QL with option 9 set to 'on'.

SuperBASIC can be sent to the Z88 by sending with option 9 set to 'off', loading as plain text into PipeDream and again adding #B .J NEW and executing it into BASIC.

Sending PipeDream documents across to the QL is simple enough and doesn't require much effort. However, it's a different story if you then want to load them into Quill. And, so far, I haven't found any way of getting a PipeDream spreadsheet into Abacus!

As far as transferring PipeDream documents into Quill, it should first be saved as plain text which is then imported, line by line, into Quill. This will strip all the format details from the text, and also means that you lose all the headers and footers. This is a small price to pay, in fact, because it would otherwise require you to manually remove the format information line-by-line. Would that it were so simple to import Quill files into PipeDream!

OVERALL?: A very useful piece of software which will save a lot of EPROM space, but I would have preferred a slightly easier transference of files to and fro, particularly BASIC. I, especially, would like to be able to transfer spreadsheets as they tend to be far more complex than any letter! But this is only version 1 and David Batty of Sector Software is going to supply upgrades when version 2 is ready.

Available from: Sector Software

0772 454328

Prices: QZ Software £15.00
 Connecting lead £ 8.00

"QL Transfer" from Z88 Users' Club

Recently, I received a copy of the Club's QL Transfer software (QL ImpExp), written by Phil Borman (0143). Phil's software arrives on microdrive cartridge which contains the ImpExp software, a Quill_doc manual, an ASCII precis of the manual for test purposes, and a Z88 printer driver.

The software has been QLiberated and multi-tasks, even under QRam, although there is one proviso to this: It works under QRam if Toolkit II is **not** enabled (unless you're very careful to ensure there are no errors reported!) This is because of a clash between the software's error handling and the toolkit's although, interestingly, the software will work with Toolkit II outside the QRam environment.

A note of warning, however, when using with QRam: If, like me, you customarily set up a printer spooler with the `^PRT_USE SER,SER` command then ImpExp will crash because - and it's logical enough if you think about it - this command buffers all serial communication and so ImpExp crashes because it's not receiving properly.

On booting, you are requested to input the destination drive (which means that that you then do not need to continually type 'flp2_', or whatever!) and to say which serial port the Z88 is connected to.

You are then presented with two windows; the upper shows the options available, the lower is for messages.

The options in the menu are:

Batch Receive

End Batch

Receive File

Send File

Print Z88 Output

Directory - obvious!

Convert QL ASCII file to PipeDream

Name Change - renaming of Z88 files, not a simple 'rename' utility.

Quit - no prizes for guessing what this does!

This menu is actually very similar to the ImpExport option on the Z88, and here is a clue to the thought that has gone into this software.

Sending a file to the QL couldn't be more simple. You just need to press 'R' and hit [ENTER] to accept the Z88's filename on the QL; i.e. if the Z88 file is :RAM.1/Letter then it will be saved as such on the QL to the default device set on booting the program.

Sending a file saved in this manner back again is almost as easy, because on the Z88 you do not need to enter the filename, it will accept the name from the QL.

Batch Receive is a method of accepting several Z88 files in sequence, using the Z88 filenames, and storing them on the QL. It is complimented by a similar function on the Z88 to receive them back again. The End Batch function is the method by which the sending machine lets the receiving machine know you've finished.

A very useful option is the Print Z88 Output facility. This, at its simplest level, allows Z88 files to be printed via the QL; useful if you have a parallel printer and converter for the QL, saving the need to buy another for the Z88. But it also means that, by using the Z88 printer driver supplied with the ImpExp software and diverting the output from ser1 to a file, you can more simply import Z88 files into Quill.

The 'ql-ed' printer driver is a null file which will remove all the embedded codes in a PipeDream file (bold, underline, etc.) whilst retaining the form of the document (tabs, etc.) This file can then be imported into Quill and it means you don't have to reformat the document.

Full details of the reverse process are given in the manual, including the form of printer_dat required. Headers and footers are again removed and a Quill_lis file produced. This can then be submitted to the 'Convert QL ASCII file to PipeDream' routine as, indeed, may an Editor file or BASIC program.

Available from: Z88 Users' Club

Price: Free! if you supply your own mdv + stamp, else £2.50 including mdv.

CONCLUSIONS: I have to admit to preferring Phil Borman's ImpExp to Sector Software's QZ. There seems to have been more thought behind the former in terms of file transfer, defaults, and generally making things simple. This is exemplified by the inclusion of the 'ql-ed' printer driver with the package, and the printer option on the menu.

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When you add this together with the fact that it is free - then there is little contest! Admittedly, Phil hasn't produced a solution to my personal need of transferring spreadsheets to and fro, but then this was not one of his stated aims and he must, therefore, be forgiven.

PROGRAM: 'THINK OF A NUMBER'
David Hambly (0173), London

This short listing enables the Z88 to perform a well known mathematical magic trick.

```
10 CLS
20 A=1:B=0
30 PRINT"A Z88 MAGIC TRICK, PROGRAMMED BY
   DAVID HAMBLY (1987)"
40 PRINT:PRINT"THINK OF A NUMBER FROM 1-63"
50 PRINT:PRINT"WHEN READY, PRESS ANY KEY"
60 C$=GET$
70 REPEAT
80   CLS:PRINT"IS YOUR NUMBER AMONG THESE?"
90   PRINT
100  FOR D=1 TO 63
110    IF D AND A THEN PRINT D;
120  NEXT
130  PRINT:PRINT:INPUT"Y=YES - N=NO";A$
140  IF A$="Y" THEN B=B+A
150  A=A*2:UNTIL A>63
160 CLS:PRINT"THINK HARD OF YOUR NUMBER"
170 GOSUB 230
180 PRINT"A LITTLE HARDER PLEASE"
190 GOSUB 230
200 PRINT:PRINT"YOUR NUMBER IS.....";B
210 PRINT:PRINT"SHEER Z88 COMPUTER MAGIC!"
220 END
230 FOR Z=1 TO 2000:NEXT:RETURN
```

Wordmongers Ltd.



21 Edison Rd, Rabans Lane, Aylesbury, Bucks. HP19 3TE
☎ (0296) 43 78 78. Prestel 029634822. Telecom Gold 84:WOT001

Terminal Software

There are currently three varieties of this suite available for the Z88. These programs are also available on the Amstrad PCW 8256.

The three versions are:-

G-Term. Wordmongers G-term is a variant of Z-term specially tailored for easy access to Telecom Gold and the other parts of the international Dialcom network. Wordmongers G-term for the Z88 incorporates most of the features of Z-term, as described above with the additional benefit of automatic log-on to Telecom Gold.

G-term Features:-

- ◇ Hayes and dumb modem compatible.
- ◇ File transfer using X-modem.
- ◇ ASCII text file capture and transmission using XON/XOFF flow control.
- ◇ Autodial directory facility for 5 numbers.
- ◇ Automatic log-on to Telecom Gold when connected directly or when connected via PSS.

G-term is £49.99 per copy inc VAT.

Z-Term. Although the Z88 comes with a terminal package, there are certain essential facilities which are unique to Z-term.

Z-term Features:-

- ◇ Hayes and dumb modem compatible.
- ◇ File transfer using X-modem.
- ◇ ASCII text file capture and transmission using XON/XOFF flow control.
- ◇ Autodial directory facility for 5 numbers.
- ◇ 5 user defined function keys.

Z-term is £49.99 per copy inc VAT.

M-Term. Wordmongers M-term is another variant of Z-term tailored for the Mercury 7500 electronic mail system. Wordmongers M-term for the Z88 incorporates most of the features of Z-term, as described above with the additional benefit of automatic log-on to Mercury 7500.

M-term Features:-

- ◇ Hayes or Dumb modem compatible.
- ◇ File transfer using X-modem.
- ◇ ASCII text file capture and transmission using XON/XOFF flow control.
- ◇ Autodial directory facility for 5 numbers.
- ◇ Automatic log-on to Mercury 7500 when connected directly or when connected via an intermediate network.

M-term is £49.99 per copy inc VAT.

Wordmongers Ltd.



21 Edison Rd, Rabans Lane, Aylesbury, Bucks. HP19 3TE
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PPS Wordmongers Phone Post System.

This system is a private electronic mail system that sends a message, a complete file or even a picture via the telephone lines anywhere in the world. It uses standard micro-computers and modems plus our economically priced PPS software.

PPS Prices:-

PPS Base (IBM or Apricot)	£ 99.50
PPS Terminal software - IBM/Apricot	£ 49.99
PPS Terminal software - Cambridge Z88	£ 49.99

Wordmongers TX file transfer system

File transfer is about sending a copy of a file, in its entirety, from one micro to another. The Wordmongers TX package is now available for over 100 different micros including most popular CP/M and MSDOS machines as well as PC compatibles and the Sinclair QL.

TX has been in use for over 5 years. TX is supplied for the pair of machines required. This pack contains the disk or cartridge for each of the pair to be linked, a manual and cable.

A TX pack for a pair of machines, one of which is the Z88, is £99.50.

Wordmongers software is licensed not sold. The full details of the software licence are available upon request from Wordmongers Ltd.

MODEMS

Acoustic couplers
 1200/75 version. £ 49.99
 300/300 £138.00

Direct connect modems
 1200P is a new small Hayes compatible pocket modem £113.85

The answercall modem is a 300/300 direct connect modem. £ 69.95

HS4000 is a Hayes compatible desktop modem which can be supplied in a variety of formats from 300/300 to 1200/1200.
 i.e. HS4000 U22 £479.00

Modem cable (if required). . . £9.99

GAMES

32K Eproms - Normal price - Free game.
 Normal price and we throw in a game. When you are bored with the game, use it as a normal Eprom. . . . £19.95

TERMINAL SOFTWARE

Z-term - General purpose with X-modem and user defined function keys.
 G-term - Telecom Gold terminal.
 H-term - Mercury 7500 terminal.
 P-term - Wordmongers PPS terminal.
 All terminals cost £49.99

Prices are valid from October 1987 and include U.A.T at 15%. Postage & Packing must be added to the amount you send at the rate of £2.00 per order.

UNDOCUMENTED FEATURES
Ian Foot (0205), Clwyd

Shortly after purchasing my Z88, I decided to start looking for features not described in the manual. After a short while playing with BBC BASIC I discovered two major undocumented features of the machine.

Having used BBC BASIC on BBC micros, I was aware of the existence of 'Star Commands'. These are operating system commands accessible from BASIC, such as *DIR to catalogue a BBC's disk drive. Most of the BBC star commands would not work on the Z88, but searching through the Z88's ROM, I discovered the following 5 star commands:-

*CLI - Executes a CLI command sequence, for example '*CLI #F' will invoke the Filer.

*DELETE will delete a file, for example '*DELETE PD/LETTER' will delete a file called 'LETTER' in directory 'PD'.

*ERASE appears to be identical to *DELETE.

*RENAME will rename a file, for example '*RENAME LETTER FRED' will rename file 'LETTER' as 'FRED'.

Finally, *NAME will assign a name to BASIC. This name will appear in the Index, under the heading 'YOUR REF.'. It is a good idea to start every BASIC program with a *NAME statement and the program's name, for example:-

```
10 *NAME PROGRAM1
```

The other main feature of the Z88 which I accidentally discovered is the ability to use symbols, alternate character sets and other screen commands from BASIC, using VDU 1. The following table gives the numbers to be used after VDU 1 or CHR\$(1) to give these features.

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Dec	Ascii	Effect	Dec	Ascii	Effect
32	' '	Dotted line	227		'DEL'
33	!	Alarm bell	228		'ESC'
39	'	Reverse '	229		'MENU'
42	*	Square	230		'INDEX'
43	+	Diamond	231		'HELP'
45	-	'SHIFT'	240		Left arrow
66	B	Bold text	241		Right arrow
67	C	Cursor on/off	242		Down arrow
70	F	Flashing	243		Up arrow
71	G	Faint text	244		Left arrow
76	L	Capitals only	245		Right arrow
82	R	Reverse print	246		Down arrow
83	S	Scroll on/off	247		Up arrow
84	T	Small text	248		Left arrow
85	U	Underline	249		Right arrow
124		Vertical line	250		Down arrow
224		'SPACE'	251		Up arrow
225		'ENTER'	254		Scroll down
226		'TAB'	255		Scroll up

For example, to use bold text from BASIC, you would type VDUL,66 or PRINT CHR\$(1);"B";, as these both have the same effect. To turn the bold text off, you use the same command again. This works for all of the effects, such as underline, scroll off/on, faint etc.

CLUB DISCOUNTS

WORDMONGERS: 10% discount on most things except modems. Ring for details on 0296 437878.

DIGITAL MATRIX LTD: £5 off the price of the Discovery 1200P Pocket Modem. Club price £95.00 +VAT. Details on 021 704 1399.

IMPORTANT NOTE: To claim your club discount you must send the envelope from your latest Z88 EPROM to the supplier with your order.

USING Ni-Cd BATTERIES II

Following on from the article in issue 1 about using rechargeable batteries, I have for the last few weeks been using an external battery pack containing five Ni-Cd cells, which will run the computer for as long as a set of normal alkaline cells. (For those naughty people without issue 1, the problem lies with the fact that Ni-Cd's only give 1.2 volts per cell, as opposed to 1.5 v from normal cells, and the lower voltage from a set of four triggers the 'BATT LOW' warning very quickly.)

The solution I have used is to buy a plastic battery holder designed to take six cells, and short out one of the cell positions so the holder will only accept five cells. You can short it out as I did by soldering a short piece of wire across the cell position, or you can use a dummy cell. A short flying lead from the battery pack's connector then plugs into the DC input socket on the Z88. Admittedly not as neat as internal batteries, but certainly more portable than using the AC adapter.

All the components should be readily available from your local electronics shop, but if you have difficulty or cannot solder I will supply the battery holder and lead, ready to use with your own cells, for £3.00 post paid.

NEXT ISSUE DUE OUT EARLY MARCH

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